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EXAMINER
ELLIOTT IV, BENJAMIN H

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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _21 March 2011_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1 and 3-19_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1,3-19_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1 and 3-19 have been examined. Claims 1, 6, and 11 have been

amended. No new matter is added. Claims 1 and 3-19 are pending.

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

3/21/2011 has been entered.

Response to Arguments

3.   Applicant's arguments with respect to claims 1, 6, and 11 have been considered

but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 1, 3-5, 17, and 18 are rejected under 35 U.S.C. 102(e) as being

anticipated by United States Patent 7,039,412 B2 to Sandhu et al (hereinafter "Sandu").

Regarding Claim 1, Sandhu discloses **a method for accessing a medium by a**

multi-channel device, in which the medium comprises a transmission system

having at least two channels (Sandhu: Figure 3 and corresponding description in Col.

3, line 59 through Col. 4, line 16; suggesting an environment wherein a particular set of

data is transmitted across a plurality of frequency channels.), **the method comprising:**

recognizing an idle state and a back-off state (Examiner corresponds an idle to a

state in which an active channel is not being used and a back-off to a station that is

waiting to utilize the channel. Sandhu: Col. 4, lines 17-49; in terms of back-off; a legacy

device may listen to a channel as part of the clear channel assessment procedure

(CCA). Legacy device may also remain quiet for a determined amount of time. Also see

Col. 2, line 54 through Col. 3, line 12; in terms of an idle state of a channel, during the

CCA process, a station "listens" to a channel to determine if it is being used (whether or

not the channel is idle).);

determining whether the idle state or the back-off state is underway on each

channel of the at least two channels that are an object of channel grouping

(Sandhu: suggested in that the CCA process allows for a wait and listen to determine if

a channel is free of being used to avoid collision.), **transmitting a message including**

a preamble and header (PR) and a control section on each channel determined to

be either idle or having the back-off underway of the at least two channels that

are an object of channel grouping to reserve the at least two channels (Sandhu:

Col. 3, line 59 through Col. 4, line 16; a message comprising a first and second is

transmitted wherein a second portion is transmitted across a plurality of channels.

Second portion comprises a high-throughput physical layer convergence protocol (HT

PLCP) preamble and header. First portion comprises associated legacy PLCP preamble

and header. Col. 4, lines 17-39; legacy device listens as part of the CCA process, which

Examiner interprets to read on the channel is determined to be in use to transmit a

PLCP protocol data unit (PPDU) and is in a waiting state to transmit.), **such that a**

single channel device detects the preamble and header and performs a process

according to control information included in the control section (Sandhu: Col. 4,

line 17 through Col. 6, line 5; cited portions suggest wireless device is directed to set a

network allocation vector (NAV) according to information received in PLCP header.).

      Regarding Claim 3, Sandhu discloses **the method of claim 1, wherein the**

message is one of a request-to-send (RTS), clear-to-send (CTS), or

acknowledgement (ACK) type (Sandhu: Figure 1 and Col. 2, lines 20-53; describing

the PPDU may be one of RTS/CTS or ACK.).

      Regarding Claim 4, Sandhu discloses **the method of claim 1, wherein the**

multi-channel device operates in compliance with IEEE 802.11 standard and a

medium access control (MAC) protocol (Sandhu: Col. 2, line 20 through Col. 3, line

12; operating according to 802.11 and MAC standards.), **the method further**

comprises repeating information belonging to the MAC protocol on the at least

two channels (Sandhu: Col. 3, line 59 through Col. 4, line 16; PPDU (comprising PSDU

information) is transmitted across a plurality of frequency channels.).

      Regarding Claim 5, Sandhu discloses **t he method of claim 1, wherein access**

to the medium takes place under IEEE 802.11 standard (Sandhu: Col. 2, line 20

through Col. 3, line 12; operating according to 802.11 and MAC standards.), **the**

method further comprising transmitting RTS, CTS and ACK control frames on the

at least two channels (Sandhu: Figure 1 and Col. 2, lines 20-53; describing the PPDU

may be one of RTS/CTS or ACK.), **and setting network allocation vectors (NAVs),**

by single channel devices, based on information in the RTS/CTS control frames

(Sandhu: Col. 2, line 20 through Col. 3, line 12, Col. 4, lines 17-39, and Col. 7, line 46

through Col. 8, line 8); setting a NAV according to information received in message.).

      Regarding Claim 17, Sandhu discloses **a multi-channel device for accessing**

a medium (Sandhu: Figure 5 and Col. 6, lines 35-64), **the medium comprises a**

transmission system having at least two channels (Sandhu: Col. 3, line 59 through

Col. 4, line 16), **the multi- channel device performing the method of claim 1 for**

accessing the medium (See above claim 1).

      Regarding Claim 18, Sandhu discloses **a wireless network** (Sandhu: Figure 1

and Col. 1, lines 38-40) **comprising a transmission system having at least two**

channels and at least one multi-channel device as claimed in claim 17 (See above

claim 17).

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating
        obviousness or nonobviousness.

8.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

9.   Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Sandhu in view of United States Patent 7,321,762 B2 to Hoeben (hereinafter "Hoeben").

Regarding Claim 6, Sandhu discloses **a method for accessing a medium by a multi-channel device, the medium including a transmission system having at least two channels that the multi-channel device intends to call upon for transmission** (Sandhu: Figure 3 and corresponding description in Col. 3, line 59 through Col. 4, line 16; suggesting an environment wherein a particular set of data is transmitted across a plurality of frequency channels.), **the method comprising: scanning, by the multi-channel device, the at least two channels to be called upon for transmission** (Sandhu: Col. 2, lines 54-64; wireless device listens to the channel. Figure 5 and Col. 6, lines 35-65; wireless device is operable to "listen" on a plurality of channels if operating in a multi-channel mode.), **recognizing an idle state and a back-off state** (Examiner corresponds an idle to a state in which an active channel is not being used and a back-off to a station that is waiting to utilize the channel. Sandhu: Col. 4, lines 17-49; in terms of back-off; a legacy device may listen to a channel as part of the clear channel assessment procedure (CCA). Legacy device may also remain quiet for a determined amount of time. Also see Col. 2, line 54 through Col. 3, line 12; in terms of an idle state of a channel, during the CCA process, a station "listens" to a channel to determine if it is being used (whether or not the channel is idle).); **determining whether the idle state or the back-off state is underway on a single one of the scanned channels** (Sandhu: suggested in that the CCA process allows for a wait and listen to determine if a channel is free of being used to avoid collision.); **blocking the single channel determined to be one of either idle or having the back-off underway to other devices by the multi-channel device by transmitting a**

message including a preamble and header (PR) and a control section (Sandhu:

Col. 3, line 59 through Col. 4, line 16; a message comprising a first and second is

transmitted wherein a second portion is transmitted across a plurality of channels.

Second portion comprises a high-throughput physical layer convergence protocol (HT

PLCP) preamble and header. First portion comprises associated legacy PLCP preamble

and header. Col. 4, lines 17-39; legacy device listens as part of the CCA process, which

Examiner interprets to read on the channel is determined to be in use to transmit a

PLCP protocol data unit (PPDU) and is in a waiting state to transmit. In terms of

blocking, as part of the CCA process, the channel then becomes "in use" and is

therefore blocked when a message, either comprising RTS/CTS, or ACK is being

transmitted.), **such that a single channel device detects the preamble and header**

and performs a process according to control information included in the control

section (Sandhu: Col. 4, line 17 through Col. 6, line 5; cited portions suggest wireless

device is directed to set a network allocation vector (NAV) according to information

received in PLCP header.)

Sandhu does not expressly disclose transmitting a plurality of messages on

another channel.

Hoeben discloses, in a similar field of endeavor particular to transmission of data

in wireless local area networks and capability with legacy devices, discloses a

transceiver capable of transmitting signals across a plurality of channels (Hoeben: Col.

2, lines 11-33). Hoeben discloses further scanning the other channels to be called upon

for transmission and blocking or reserving the other channels on determining that the

channel concerned is one of either idle or that a back-off is underway by transmitting

another message on that channel concerned (Hoeben: Col. 10, lines 31-42 and Figure

8. Station 202-j also monitors channels 203-2. Transmits reservation message for

channel thereby reserving and blocking use from other devices.).

It would have been obvious to one having ordinary skill in the art to modify the

method of accessing a medium by a multi-channel device as disclosed by Sandhu to

include the scanning and reservation technique as suggested by Hoeben in order for

legacy stations to coexist with enhanced stations and to allow legacy stations to better

recognize a channel in use (Hoeben: Col. 1, line 60 through Col. 2, line 7).

Regarding Claim 7, the combination of Sandhu and Hoeben discloses **the**

method of claim 6, wherein Hoeben further discloses **blocking the channel by the**

multi-channel device (Hoeben: Figure 2, enhanced access point) **and a receiving**

device (Hoeben: Figure 2, enhanced station), **each of the devices emitting the**

message (Hoeben: Col. 4, lines 40-45 and Col. 5, lines 49-54).

Regarding Claim 8, the combination of Sandhu and Hoeben discloses **the**

method of claim 7, wherein Hoeben further discloses **the message is implemented in**

the form of RTS and CTS frames (Hoeben: Col. 6, lines 20-28 and Col. 10, lines 46-

53; control section inherent to CTS and RTS), **the method further comprising:**

transmitting an RTS frame on a free channel by the multi-channel device, so that

devices in the area surrounding the multi-channel device that is transmitting will

set their network allocation vectors (NAVs) (Hoeben: Col. 6, lines 41-44), **and**

transmitting a CTS frame on the free channel by the receiving device, so that

stations in the area surrounding the receiving station will set their NAVs (Hoeben:

Col. 10, lines 46-53).

Regarding Claim 9, the combination of Sandhu and Hoeben discloses **the**

method of claim 7, wherein Hoeben further discloses **transmitting with channel**

grouping, by the multi-channel device, on all channels that it has previously

blocked (Hoeben: Col. 10, lines 31-42; During the reservation duration, stations refrain

from transmitting. Col. 10, lines 43-45. The station transmits over the two stations.).

Regarding Claim 10, the combination of Sandhu and Hoeben discloses **the**

method of claim 6, wherein Hoeben further diuscloses **blocking a channel by**

starting the transmission by the multi-channel station on the single channel

(Hoeben: Col. 10, lines 39-42. Stations refrain from transmitting on the channel during

reservation duration.) Sandhu discloses **wherein the transmission can be made with**

or without an RTS-CTS mechanism (Sandhu: Figure 1 and Col. 2, lines 20-53;

describing the PPDU may be one of RTS/CTS or ACK.).

10.   Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Sandhu, in view of United States Patent 7,289,529 B2 to Sherman (hereinafter

"Sherman").

Regarding Claim 11, Sandhu discloses **a method for accessing a medium by**

a multi-channel device, the medium comprises a transmission system having at

least two channels that the multi-channel device intends to call upon for

transmission (Sandhu: Figure 3 and corresponding description in Col. 3, line 59

through Col. 4, line 16; suggesting an environment wherein a particular set of data is transmitted across a plurality of frequency channels.), **wherein a message to be transmitted on the medium comprises a preamble and a header (PR) followed by at least one of a control section or data section** (Sandhu: Col. 3, line 59 through Col. 4, line 16; a message comprising a first and second is transmitted wherein a second portion is transmitted across a plurality of channels. Second portion comprises a high-throughput physical layer convergence protocol (HT PLCP) preamble and header. First portion comprises associated legacy PLCP preamble and header. Col. 4, lines 17-39; legacy device listens as part of the CCA process, which Examiner interprets to read on the channel is determined to be in use to transmit a PLCP protocol data unit (PPDU) and is in a waiting state to transmit.), **the method comprising:**

scanning the at least two channels to be called upon for transmission (Sandhu: Col. 2, lines 54-64; wireless device listens to the channel. Figure 5 and Col. 6, lines 35-65; wireless device is operable to "listen" on a plurality of channels if operating in a multi-channel mode.), **recognizing an idle state and a back-off state** (Examiner corresponds an idle to a state in which an active channel is not being used and a back-off to a station that is waiting to utilize the channel. Sandhu: Col. 4, lines 17-49; in terms of back-off; a legacy device may listen to a channel as part of the clear channel assessment procedure (CCA). Legacy device may also remain quiet for a determined amount of time. Also see Col. 2, line 54 through Col. 3, line 12; in terms of an idle state of a channel, during the CCA process, a station "listens" to a channel to determine if it is being used (whether or not the channel is idle).);

determining whether the idle state or the back-off state is underway on each

channel of the at least two channels to be called upon for transmission (Sandhu:

suggested in that the CCA process allows for a wait and listen to determine if a channel

is free of being used to avoid collision.), **repeating the preamble and header (PR) of**

the message on all channels to be called upon for transmission that are

determined to be either idle or having a back- off underway (Sandhu: Col. 3, line 59

through Col. 4, line 16; a message comprising a first and second is transmitted wherein

a second portion is transmitted across a plurality of channels. Second portion comprises

a high-throughput physical layer convergence protocol (HT PLCP) preamble and

header. First portion comprises associated legacy PLCP preamble and header. Col. 4,

lines 17-39; legacy device listens as part of the CCA process, which Examiner interprets

to read on the channel is determined to be in use to transmit a PLCP protocol data unit

(PPDU) and is in a waiting state to transmit.).

Sandhu does not expressly disclose reserving or blocking by a third device.

However, Sherman discloses **reserving or blocking, by a third device**

independent of a transmitter and receiver of the message, the channels in the

channel group for the multi-channel device that intends to transmit, such that a

single channel device detects the preamble and header and performs a waiting

process (Sherman: Col. 6, lines 21-40. A point coordination function or hybrid

coordination function work as part of the reserve protocol for contending transmissions

to gain access to the wireless medium (by way of the CSMA protocol).).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify the teachings of Sandhu to include a third device

for reserving channels as taught by Sherman to optimize performance by the hybrid

coordinator for efficient use of the medium (Sherman: Col. 2, lines 14-20).

Regarding Claim 12, the combination of Sandhu and Sherman discloses **the**

method of claim 11, wherein Sherman further discloses **coordinating, by the third**

device, access to the medium for a plurality of channels (Sherman: Col. 4, lines 43-

44. The PCF (point coordination function) makes use of PIFS (PCF interframe space) to

seize and maintain control of the medium.).

Regarding Claim 13, the combination of Sandhu and Sherman discloses **the**

method of claim 11, wherein Sherman further discloses **in the event of individual**

channels in the channel group not becoming free simultaneously, the third device

causes, alternatively, blocking one channel or individual channels until such time

as all the channels in the channel group have become free (Sherman: Col. 6, lines

21-40. The superframe of the control contention/resource reservation protocol

comprises both a contention period and a contention-free period on all channels (Figure

2A in conjunction with Figure 1, multiple channels).), or assigning a channel that has

become free immediately to the multi- channel device that intends to transmit.

Regarding Claim 14, the combination of Sandhu and Sherman discloses, **the**

method of claim 11, wherein Sherman further discloses **the third device is a hybrid**

coordinator or point coordinator (Sherman: Col. 6, lines 21-40. A point coordination

function or hybrid coordination function work as part of the reserve protocol for

contending transmissions to gain access to the wireless medium (by way of the CSMA

protocol).), **the method performing the medium access under standard IEEE 802.11**

(Sherman: Abstract and Col. 4, lines 3-13).

11.   Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Sandhu, in view of Sherman, and further in view of United States Patent Application

Publication 2005/0111402 A1 to Sawada et al (hereinafter "Sawada").

        Regarding Claim 15, the combination of Sandhu and Sherman discloses **the**

method of claim 14, wherein Sherman discloses **transmitting by the point**

coordinator or hybrid coordinator, beacons on all the channels (Sherman: Col. 4,

lines 57-59).

        Sherman does not explicitly recite the beacons are sent in parallel.

        Sawada discloses sending the beacons in parallel over a plurality of channels

(Sawada:[0009]).

        It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the method of Hoeben, in view of Bowers, in view of

802.11-1999, and further in view of Sherman to include sending beacons in parallel as

taught by Sawada. This benefits the method by allowing registration and authentication

of two or more communication stations at the same time in a master/slave environment

(Sawada: [0010]).

12.   Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Sandhu, in view of US Patent 7,415,046 B2 to Beckman et al. (hereinafter "Beckman").

        Regarding Claim 16, Sandhu discloses **the method of claim 1**, but is silent on

the transmission system using UMTS (Universal Mobile Telecommunication System).

        However, Beckman discloses **employing the Standard Universal Mobile**

Telecommunication System (UMTS) (Beckman: Col. 9, lines 61-63. Data is

transmitted through channels over an air interface using UMTS.).

        Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify the teachings of Sandhu to include transmitting

information based on UMTS as taught by Beckman to easily establish a point-to-point

connection between layer 1 and layer 2 devices, as UMTS utilizes the air interface

comprising layer 1 and layer 2 (of the OSI model). This recognizes the use of UMTS

along side the medium access control (MAC) of the claimed invention (Beckman: Col. 1,

lines 30-58).

13.   Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Sandhu in view of United States Patent 7,272,156 B2 to Shoemake et al (hereinafter

"Shoemake").

        Regarding Claim 19, Sandhu **discloses the method as claimed in claim 1**,

but does not expressly define that the preamble and header are repeated in parallel

over the plurality of channels.

Shoemake discloses a wireless station capable of calculating multiple decisions

without the need of additional hardware (Shoemake: Col. 1, lines 37-42). The device is

located in an environment of 802.11(e) (Shoemake: Col. 2, lines 65-67). Shoemake

discloses the utilization of PLCP headers and preambles transmitted in frames based

on the 802.11(e) standard (Shoemake: Col. 2, lines 2-5). Shoemake discloses **the**

preamble and header (PR) are repeated in parallel on the at least two channels

(Shoemake: Col. 2, lines 13-17. The preamble and header portions of the PLCP frame

are transmitted in parallel along with calculations of parameters as needed for the

MPDU (MAC protocol data unit).).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the method of Sandhu to transmit preambles and

headers in parallel on a plurality of channels as disclosed by Shoemake. This benefits

the method by reducing the amount of calculations of transmission parameters before

the actual transmission (Shoemake: Col. 1, lines 17-33).

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to BENJAMIN ELLIOTT whose telephone number is

(571)270-7163. The examiner can normally be reached on Monday thru Friday, 8:00

AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Aung Moe can be reached on (571)272-7314. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aung S. Moe/   BENJAMIN ELLIOTT
Supervisory Patent Examiner, Art Unit 2474   Examiner
                                                                 Art Unit 2474